REMARKS

Claims 1, 3-7, 10, 12-20, 28-31, 33-34, and 36 are pending in the application. Claims 1, 3-7, 10, 12, 28, 33 and 36 have been amended. Claims 8, 9, and 32 are canceled. Support for the claim amendments is found on page 18, paragraphs [0046] and [0047] of the instant specification. Claims 1, 3-7, 10, 12-20, 28-31, 33-34, and 36 presently stand rejected.

Telephone Conversation With Examiner

Examiner Pan is thanked for the telephone conversation conducted on December 12, 2008. Proposed claim amendments were discussed. Cited art was discussed. Although it appears that the proposed amendments overcome the rejections based on the cited art, no agreements were reached.

Regarding the Rejections under 35 U.S.C. §103

Claims 1, 3-7, 10, 12-20, 28-31, 33-34, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Juels et al. (US Patent No. 7,197,639, hereinafter "Juels") in view of Landsman et al. (US Patent Pub. No. 2005/0055410, hereinafter "Landsman"). These rejections are respectfully traversed.

Juels and Landsman, whether considered separately or in combination, neither disclose nor suggest "communicatively connecting a plurality of cancellation servers through a coordinating cancellation server," for "validating the identifier by verifying that the identifier does not already exist in the database in the first cancellation server or the database in the second cancellation server" where "upon validating, canceling the cryptographic puzzle by storing in each database in each cancellation server in communication with the coordinating cancellation server the identifier or information derived from the identifier" as recited in claims 1, 28, and 36, nor "receiving a REJECT response from any one of the cancellation servers communicatively coupled to the coordinating cancellation server as a result of the identifier being already present in a database of at least one cancellation server" as recited in claim 12.

Juels relates to cryptographic communications methods and systems that protect a server from a connection depletion attack. Landsman relates to managing electronic messages and computer systems sending one, two, or more challenge messages to the sender of the electronic messages in determining whether to deliver an electronic message.

The Office Action asserts that Juels teaches a cancellation server communicatively coupled to at least one database, however, it does not. The Office Action is silent with regard to a coordinating cancellation server and the functions provided by this manager of cancellation activities. The Office Action looks to Landsman for a disclosure of a database use, however, Landsman does not provide the remedy for the lack of disclosure in Jules.

The Office Action seems to assert that the server referenced in Col. 19, lines 38-47 of Juels discloses the function of a cancellation server. However, the server disclosed in Col. 19 is a security server that ensures that a puzzle may not be used more than once by verifying that in each of a plurality of received messages a particular puzzle is used only once (see lines 27-47). Juels teaches away from the use of a database for submitting or solving cryptographic puzzles, or maintaining any information concerning the validation of users at all. In Col 16, lines 41-48 Juels discloses "it is desirable that the server 120 be able to verify, via the computational task solution verifier 150 (FIG. 1), *without the use of a database containing puzzle imposition history data*, or any other data, that a puzzle solution presented by a client" (emphasis added) and, in lines 50-52 that "This mechanism can also be referred to as a "stateless, memory less or history less" method of the server 120 to process the return of previously imposed puzzles." This disclosure is not the same as a cancellation server that maintains a database of puzzles for use in validating an incoming message by ensuring that a puzzle identifier does not already exist in a database maintained on the cancellation server. In addition, there is no disclosure in Jules for the existence of a coordinating cancellation server that validates that a puzzle does not already exist (has been used) in multiple databases on more than one cancellation server. Thus, not only does

Juels not disclose or suggest that it is desirable to couple a cancellation server with a database containing previously available puzzle information, or that a coordinating cancellation server may broaden the reach of the validation function, but also that Juels teaches away from this concept and toward a concept that only real-time, stateless, ad hoc cryptographic puzzle solutions are adequate to insure the security of the messages to be sent. Thus, Jules does not disclose the subject matter of claims 1, 28, and 36, and Jules teaches away from the subject matter of claims 1, 12, 28, and 36.

Combining Landsman with Juels does not cure the deficiencies of Juels. Landsman discloses "a challenge generation module 48 of a challenge module 42 of the recipient server 16 may determine whether the sender is designated in a sender database 56 as being authorized (or unauthorized) to send electronic messages to the recipient" as the use of a database. This is completely different from a cancellation server coupled to a database that is used *by the recipient* (emphasis added) to verify that data security of an incoming message has not been violated. In addition, Landsman is completely silent with regard to a coordinating cancellation server for the validation of a plurality of database entries across multiple cancellation servers. Therefore, Landsman does not provide the disclosure to remedy the lack of teaching in Juels for the claim features as recited in claims 1, 28, and 36. Thus, the combination of Juels and Landsman does not provide the teaching to render claims 1, 28 and 36 obvious.

The Office Action seems to assert that Juels provides the disclosure for "receiving a REJECT response from any one of the cancellation servers communicatively coupled to the coordinating cancellation server as a result of the identifier being already present in a database of at least one cancellation server" as recited in claim 12 in Col. 13, lines 31-45, however, it does not. This disclosure in Juels relates to the entry of a single server into defensive mode upon becoming aware of an attack on the server. There is no disclosure for the management of a coordinating cancellation server in determining that an identifier is validated in multiple cancellation servers and a reject response generated if the puzzle is identified in a database in any

of the cancellation servers, as recited in claim 12. Therefore, Juels does not provide the disclosure for at least this feature of claim 12.

The Office Action looks to the Landsman reference to remedy this lack. However, Landsman is completely silent with regard to a coordinating cancellation server in communication with a plurality of cancellation servers for the validation of entries in databases maintained within the plurality of cancellation servers. Therefore, Landsman does not provide the disclosure to remedy the lack of teaching Juels for the claim features as recited in claim 12. Thus the combination of Juels and Landsman does not provide the teaching to render claim 12 obvious.

Claims 3-7, 10, 13-20, 29-31, 33 and 34 all depend, either directly or indirectly, from one of claims 1, 12, and 28. As such, the applicants submit that these claims are patentable over the combination of the Juels and Landsman references for at least the same reasons as stated above with respect to claims 1, 12, and 28. Accordingly, reconsideration and allowance are respectfully requested.

CONCLUSION

For the forgoing reasons, Applicants respectfully submit that the instant application is in condition for allowance. Reconsideration and early allowance is hereby respectfully requested.

Date: January 7, 2009

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